

State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF AIR QUALITY

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
Ursula K. Trueman
Director

150 North 1950 West
P.O. Box 144820
Salt Lake City, Utah 84114-4820
(801) 536-4000 Voice
(801) 536-4099 Fax
(801) 536-4414 T.D.D.

DAQE-789-97

August 20, 1997

Brent Baker
Salt Lake Valley Sand and Gravel
PO Box 2115
Sandy, Utah 84091

Dear Mr. Baker:

Re: Approval Order to Increase Production, Increase Operation Hours, Replace Sand Equipment and Decrease Haul Distance, Salt Lake County, CDS-SM, Non-Attainment

The attached document is an Approval Order for the above referenced project.

Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Tad Anderson. He may be reached at (801) 536-4456.

Sincerely,

Ursula K. Trueman, Executive Secretary
Utah Air Quality Board

UKT:TDA:cmn

cc: Salt Lake City / County Health Department
Mike Owens, EPA Region VIII

Image Not
Available

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

APPROVAL ORDER TO INCREASE PRODUCTION, INCREASE OPERATION HOURS, REPLACE SAND EQUIPMENT AND DECREASE HAUL DISTANCE

**Prepared By: Tad Anderson, Engineering Technician
Reviewed By: Tim Blanchard, Engineer**

APPROVAL NUMBER

DAQE-789-97

Date: August 20, 1997

Source

Salt Lake Valley Sand and Gravel

**Ursula K. Trueman
Executive Secretary
Utah Air Quality Board**

Abstract

Salt Lake Valley Sand and Gravel company was originally restricted by the PM₁₀ SIP Section IX, Part H.2.b.SS. Since then, the company has been issued an approval order and made modifications to equipment and process from the original PM₁₀ SIP. With the last modification, Salt Lake Valley Sand and Gravel company has acquired some emissions banking and is asking to use their banked emissions to increase their annual production limit from the original PM₁₀ SIP.

Salt Lake Valley Sand and Gravel company has proposed to increase their annual production, time of operation, and replace a sand plant which will decrease the haul distance for the loaders. The company has proposed a 500,000 ton annual production and a 1248 hours per year increase from the last Approval Order AO (DAQE-1118-96). The emissions increase will consume 15.3 tons/year of pollutant from their 16.57 tons/year of pollutant that was banked in the AO (DAQE-1118-96). Total emissions from the source after modification shall not exceed the following: 75.98 tons/year of TSP, 37.14 tons/year of PM₁₀, 1.73 tons/year of SO₂, 17.96 tons/year of NO_x, 5.44 tons/year of CO and 2.38 tons/year of VOC. This source has undergone a 30-day public comment period.

The above-referenced project has been evaluated and found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307), and the Utah Air Conservation Act. A 30-day public comment period was held and all comments received were evaluated. The conditions of this Approval Order reflect any changes to the proposed conditions which resulted from the evaluation of the comments received. This air quality Approval Order (AO) authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order:

General Conditions:

1. This AO applies to the following company:

Salt Lake Valley Sand & Gravel Company
16500 South 500 West
P.O. Box 2115
Sandy, Utah 84091

The equipment listed in Condition 5 of this AO shall be operated at the following location:

PLANT LOCATION:

Point of the Mountain, West of I-15, 2 miles south of the prison.
UTM: 4,478,500 Northing; 422,250 Easting

2. Salt Lake Valley Sand and Gravel shall install and operate the sand plant at the aggregate production plant at the southern border of Salt Lake County, according to the terms and conditions of this AO as requested in the Notice of Intent dated August 19, 1996.
3. Regardless of any inconsistency between conditions of this AO and Section XI, Part H.2, and Subparts 2.b.SS Salt Lake Valley Sand and Gravel. Section IX, Part H (Emission Limitations) of the SIP, this AO shall take precedence as provided by R307-1-3.2.4, UAC. The language of Section IX, Part H, 2.b and Section IX, Part H, 2.b.SS have been incorporated in this AO.

4. A copy of this AO shall be posted on site. The AO shall be available to the employees who operate the air emission producing equipment. These employees shall receive instruction as to their responsibilities in operating the equipment in compliance with all of the relevant conditions listed below.
5. This AO shall replace the AO dated December 17, 1996 (DAQE-1118-96).
6. The approved installations shall consist of the following equipment or equivalence* with capable of producing air contaminants located at the site:

Concrete Batch Plant

- A. Two 60 ton sand and gravel bins
- B. One 8 yard McNeilus sand and gravel weigh hopper
- C. Two 60 foot long conveyors
- D. One 50 foot long conveyor
- E. Two cement silos - 110,000 LB capacity each(with bin vents)
- F. Ross mixing drum
- G. Rex plant consisting of cement weigh hopper and aggregate weigh hopper
- H. 750 barrel cement silo (280,000 Ib)
- I. Rex Bin Vent
- J. Baghouse

(Note :Items F, G & H are controlled by baghouse)

Main Crushing & Washing Plant

- A. Torgensen Scalper 4 x 16
- B. Vibranetics Feeder 3 x 10
- C. 50 ton sand bin with 2 Syntron Feeders
- D. 40" x 20' conveyor
- E. 24" x 180' conveyor
- F. 6' x 20' TelSmith Screen SN #313M12953
- G. TelSmith Cone Crusher SN# 212M588
- H. 36" x 40' conveyor
- I. 24" x 60' conveyor
- J. 8' x 20' Cedarapids Incline Wash Screen
- K. Twin Flight 54" Sand Screw
- L. 20" x 50' conveyor
- M. 24" x 60' conveyor
- N. 24" x 240' conveyor
- O. 24" x 200' conveyor
- P. 100 ton gravel bin
- Q. (4) 24" x 100' stacking conveyors
- R. Titan Powerscreen 4' x 8' ID# 3801809
- S. Mark II Powerscreen 4' x 5' ID# 2411018
- T. 30 ton trap

- U. 24" x 100' conveyor
- V. 20" x 140' conveyor
- W. 4' x 10' dry screen enclosed in a building
- X. 24" x 100' conveyor
- Y. 50 ton storage bin
- Z. 75 ton storage bin

*equivalency shall be determined by the Executive Secretary.

Limitations and Tests Procedures

7. The following production limits shall not be exceeded without prior approval in accordance with R307-1-3.1, UACR:
 - A. 100 tons/hr cone crusher throughput
 - B. 250,000 tons/yr cone crusher throughput
 - C. 300 tons/hr total sand and gravel throughput
 - D. 1,500,000 tons/yr total sand and gravel throughput
 - E. 24 hours/day sand and gravel plant operation
 - F. 6000 hours/yr sand and gravel plant operation
 - G. 80 cubic yards/hr concrete production
 - H. 160,000 cubic yards/yr concrete production
 - I. 12 hours/day concrete batch plant operation
 - J. 2000 hours/yr concrete batch plant operation (Total for both plants)
8. Compliance with the annual limitations listed above shall be determined on a rolling 12-month total. Based on the first day of each month a new 12-month total shall be calculated using the previous 12 months. Records of production or throughput shall be kept for all periods when the plant is in operation. These records shall be made available to the Executive Secretary or her representative upon request, and shall include a period of two years ending with the date of the request.
9. The silos shall be pneumatically loaded with cement or fly ash. The displaced air from the silos generated during filling shall be passed through a baghouse. One baghouse shall be used to control emissions from the two silos. The flow rate through the baghouse shall not exceed 1100 ACFM.
10. The baghouse flow rate shall be measured at the request of the Executive Secretary. The method shall be 40 CFR 60, Appendix A, Method 2.

Roads and Fugitives

11. Visible emissions limits shall be as follows:
 - A. Fugitive emissions shall not exceed 15% opacity.
 - B. Fugitive dust shall not exceed 20% opacity.
 - C. Baghouse shall not exceed 10% opacity.

12. Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9. For intermittent sources and mobile source emissions, opacity observations shall be conducted using a modified Method 9 (not all 24 readings for a six-minute period required).
13. All unpaved operational areas which are used by mobile equipment shall be water sprayed and/or chemically treated to reduce fugitive dust. Control is required at all times (24 hours per day every day) for the duration of the project/operation. The application rate of water shall be a minimum of 0.25 gallons per square yard. Application shall be made at least once every two hours during all times the installation is in use unless daily rainfall exceeds .10 of an inch, or the road is in a muddy condition, or if it is covered with snow, or if the ambient temperature falls below freezing or if the surfaces are in a moist/damp condition. If chemical treatment is to be used the plan must be approved by the Executive Secretary. Records of water treatment shall be kept for all periods when the installation is in operation. The records shall include the following items:
 - A. Date
 - B. Number of treatments made, dilution ratio, and quantity
 - C. Rainfall received, if any, and approximate amount
 - D. Time of day treatments were made

Records of treatment shall be made available to the Executive Secretary upon request and shall include a period of two years ending with the date of the request.

14. Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive emissions:
 - A. All crushers
 - B. All screens
 - C. All conveyor transfer points between crusher and wash plant

The sprays shall operate whenever dry conditions warrant or as necessary, such that emissions shall not exceed the opacity limitation.

15. All conveyor transfer points prior to crusher shall be enclosed unless water sprays are installed at those points.
16. The desanding screen shall be enclosed by rubberized drapes. The drapes shall cover the top and sides of the screen. A water spray shall be installed under the screen to spray sand as it falls through the screen and shall be used as dry conditions warrant in order to meet the opacity limitation.
17. The moisture content of the material passing through the desanding screen shall be maintained at a value of no less than 4.0% by weight. The moisture content shall be tested if directed by the Executive Secretary using the appropriate ASTM method.

18. The storage piles shall be watered to minimize generation of fugitive dusts as dry conditions warrant or as determined necessary by the Executive Secretary.

Records & Miscellaneous

19. No modifications to this source, which would result in an increase of annual emissions, shall be approved without an analysis of the effect on the PM₁₀ SIP.
20. All installations and facilities authorized by this AO shall be adequately and properly maintained. Maintenance records shall be maintained while the plant is in operation. All pollution control vendor recommended equipment shall be installed, maintained, and operated. Instructions from the vendor or established maintenance practices that maximize pollution control shall be used. All necessary equipment control and operating devices, such as pressure gauges, amp meters, volt meters, flow rate indicators, temperature gauges, etc., shall be installed and operated properly and easily accessible to compliance inspectors. A copy of all manufacturers' operating instructions for pollution control equipment and pollution emitting equipment shall be kept on site. These instructions shall be available to all employees who operate the equipment and shall be made available to compliance inspectors upon their request.
21. The owner/operator shall comply with R307-1-3.5, UACR. This rule addresses emission inventory reporting requirements.
22. The owner/operator shall comply with R307-1-4.7, UAC. This rule addresses unavoidable breakdown reporting requirements. The owner/operator shall calculate/estimate the excess emissions whenever a breakdown occurs. All excess emissions shall immediately be reported to the Executive Secretary. The total of excess emissions shall be reported to the Executive Secretary as directed for each calendar year.

All records referenced in this AO which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or her representative upon request and shall include a period of two years ending with the date of the request. All records shall be kept for a period of two years. Examples of records to be kept at this source shall include the following as applicable:

- | | | |
|----|---------------------------|------------------------|
| A. | Production rate | (Condition number 7) |
| B. | Maintenance records | (Condition number 20) |
| C. | Upset, breakdown episodes | (Condition number 22) |
| D. | Fugitive emission control | (Condition number 15) |

Any future modifications to the equipment approved by this order must also be approved in accordance with R307-1-3.1.1, UAC.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including the Utah Air Conservation Rules.

Annual emissions for this source are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	TSP	75.98
B.	PM ₁₀	37.14
C.	SO ₂	1.73
D.	NO _x	17.96
E.	CO	5.44
F.	VOC	2.38

These calculations are for the purposes of determining the applicability of Prevention of Significant Deterioration and nonattainment area major source requirements of the UAC R307. They are not to be used for purposes of determining compliance.

Emission decreases as a result of this modification are hereby banked for Salt Lake Valley Sand and Gravel. The banked decreases are as follows:

Pollutant	Banking previous	Increment used	Banking Present
	<u>Tons/yr</u>	<u>Tons/yr</u>	<u>Tons/yr</u>
PM ₁₀	0.08	0.0	0.08
SO ₂	12.22	11.03	1.19
NO _x	3.39	3.39	0.0
CO	0.85	0.85	0.0
VOC	0.03	0.03	0.0

Approved By:

Ursula K. Trueman, Executive Secretary
Utah Air Quality Board